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Amendment to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application:

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1-46. (canceled)

- A method of inducing an immune response against an 47. (Currently amended) infection caused by Neisseria meningitidis or Neisseria gonorrhoeae bacteria in a human in need thereof, comprising administering to the human an effective amount of a recombinant protein having consisting of the amino acid sequence consisting of set forth in SEQ ID NO.: 4.
- (Currently amended) A method of inducing an immune response against an 48. infection caused by Neisseria meningitidis or Neisseria gonorrhoeae bacteria in a human in need thereof, comprising administering to the human an effective amount of a pharmaceutical composition comprising a recombinant protein and a pharmaceutically acceptable carrier, wherein the protein has-consists of the amino acid sequence consisting of set forth in SEQ ID NO: 4.
- 49. The method according to claim 47, further (Previously presented) comprising a step of administering to the human a polysaccharide antigen.
- The method according to claim 48, wherein the 50. (Previously presented) pharmaceutical composition further comprises a polysaccharide antigen.
- 51. (Previously presented) The method according to claim 50, wherein the polysaccharide antigen is a capsular polysaccharide of Neisseria meningitidis.
- 52. (Canceled)
- The method according to claim 48, wherein the 53. (Previously presented) pharmaceutical composition further comprises a peptide antigen.
- 54. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition is administered parenterally.

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55. (Previously presented) The method according to claim 48, wherein the pharmaceutical composition is administered mucosally.

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- 56. (Previously presented) The method according to claim 55, wherein the pharmaceutical composition is administered orally.
- 57. (Currently amended) A method of inducing an immune response against an infection caused by *Neisseria meningitidis* or *Neisseria gonorrhoeae* bacteria in a human in need thereof, comprising administering to the human an effective amount of a recombinant fusion protein, wherein the fusion protein comprises consists of the first 47 amino acids of the N-terminus of P64k protein from *Neisseria meningitidis* and the amino acid sequence consisting of set forth in SEQ ID NO.: 4.